WE CLAIM:

1. A method of checking for excessive drag in an elevator system having a car moveable in a hoistway, characterized by:

initially, establishing baseline currents while the elevator is operating properly with no drag, by:

(a) with the car either empty or carrying a load which is a small fraction of rated load, recording (10) the motor current at a plurality of predetermined steady motor current conditions while moving the car upwardly, and recording (11) the motor current at a plurality of predetermined steady motor current conditions while moving the car downwardly;

(b) with the car carrying a load which is either 100% or a high fraction of rated load, recording (12) the motor current at a plurality of predetermined steady motor current conditions while moving the car upwardly and recording (13) the motor current at a plurality of predetermined steady motor current conditions while moving the car downwardly;

then, during normal operation of the elevator over time, during at least some normal runs of the elevator car, comparing the motor current used to operate the car with motor current predicted to be required to move the car under its present load, direction and position in the hoistway, by:

(c) when the doors are closed (21) at the beginning of a run, recording (22) the actual car load, the current floor number (25) and direction of the car (26), and from that and the currents recorded in steps (a) and (b), predicting (28) the motor current required at one of said predetermined steady motor current conditions, including said actual car load and said direction, related to said current floor number;

(d) recording (33) the actual motor current at said one of said predetermined steady motor current conditions; and

(e) if said actual motor current exceeds the predicted motor current by a tolerance value (34), shutting down the elevator (39) at the next committable floor.

2. A method according to claim 1 wherein said step (e) further comprises:

generating (40) a drag message for service personnel.

3. A method according to claim 1 wherein:

said steps (a) and (b) comprise:

with the car moving at rated speed, recording (10-13) the motor current at each of a plurality of predetermined positions of the car in the hoistway; said step (c) comprises:

predicting (28) the motor current required to move the car at rated speed past the next one of said predetermined positions for said direction; and said step (d) comprises:

recording (33) the motor current when the car is traveling at rated speed (29) at said next one of said predetermined positions (30).

4. A method according to claim 3 wherein:

said predetermined positions are floor commitment positions (30).

5. A method of checking for effective brake operation in an elevator system having a car moveable in a hoistway, comprising:

(a) first, determining (57) a baseline amount of motor current required to move the elevator (54) car a small threshold amount, under certain conditions comprising position (46), load (45) and direction (47), with the brake engaged (48), when the brake is known to be in proper operating condition; and

(b) thereafter, periodically determining whether a high fraction of said baseline amount of current (90) is capable of moving the elevator car by more than a small tolerance amount (92) under the same said certain conditions (70-72, 85); and

(c) if the car does move by more than said tolerance amount in said step (b), generating (102) a torque fault message for service personnel.

6. The method according to claim 5 wherein, if said torque fault message is generated in step (c), shutting the elevator system down (101).

7. The method according to claim 5 wherein said steps (a) and (b) are performed with the car under minimal load (64).

8. The method according to claim 5 wherein said certain conditions include the car being at or near a top floor (46; 66) with no load (45; 64) and its direction of motion being up (47, 85).

9. A method of checking for excessive drag and for effective brake operation in an elevator system having a car moveable in a hoistway, characterized by:

initially, establishing baseline currents while the elevator is operating properly with no drag, by:

(a) with the car either empty or carrying a load which is a small fraction of rated load, recording (10) the motor current at a plurality of predetermined steady motor current conditions while moving the car upwardly, and recording (11) the motor current at a plurality of predetermined steady motor current conditions while moving the car downwardly;

(b) with the car carrying a load which is either 100% or a high fraction of rated load, recording (12) the motor current at a plurality of predetermined steady motor current conditions while moving the car upwardly and recording (13) the motor current at a plurality of predetermined steady motor current conditions while moving the car downwardly;

then, during normal operation of the elevator over time, during at least some normal runs of the elevator car, comparing the motor current used to operate the car with motor current predicted to be required to move the car under its present load, direction and position in the hoistway, by:

(c) when the doors are closed (21) at the beginning of a run, recording (22) the actual car load, the current floor number (25) and direction of the car (26), and from that and the currents recorded in steps (a) and (b), predicting (28) the motor current required at one of said predetermined steady motor current conditions, including said actual car load and said direction, related to said current floor number;

(d) recording (33) the actual motor current at said one of said predetermined steady motor current conditions;

(e) if said actual motor current exceeds the predicted motor current by a tolerance value (34), shutting down the elevator (39) at the next committable floor;

(f) determining (57) a baseline amount of motor current required to move the elevator (54) car a small threshold amount, under certain conditions comprising position (46), load (45) and direction (47), with the brake engaged (48), when the brake is known to be in proper operating condition;

(g) after step (f), periodically determining whether a high fraction of said baseline amount of current (90) is capable of moving the elevator car by more than a small tolerance amount (92) under the same said certain conditions (70-72, 85); and

(h) if the car does move by more than said tolerance amount in said step (b), generating (102) a torque fault message for service personnel.